

outstanding Office Action by the number of months which will avoid abandonment under 37 CFR 1.135. The fee under 37 CFR 1.17 should be charged to our Deposit Account No. 50-2215.

REMARKS

Claims 1-5 and 11 were rejected under 35 U.S.C. 103 over Yamada. This rejection is respectfully traversed.

Claim 1 relates to a flame-retardant thermoplastic resin composition in which a 30-55.5% of a plant derived resin is combined with 44 to 70% of a flame retardant of which 90% or more is composed of a metal hydrate containing an alkali metal-based substance in an amount of 0.2% or less.

The Yamada reference has been cited to show a flame retardant having an impurity level of 0.5% or less. There is no specific disclosure of 0.2% or less and the Declaration submitted herewith establishes that the impurity level in the species actually disclosed in this reference was greater than 0.2%.

As the Examiner has pointed out, Yamada teaches at a purity level of about 99.5% is preferred because the shelf stability is improved relative to a lower purity level. However, there is no teaching or suggestion in the reference that there is any shelf stability increase above 99.5%. Applicants agree with the Examiner that this teaching would have motivated one skilled in the art to achieve a purity level of 99.5% in order to have an improved shelf stability but respectfully disagree with the implicit assertion in the Office

Action that the person skilled in the art would have a reason to make the purity 99.8% or more.

The Examiner has correctly pointed out that the cost of purification is a relevant consideration. As pointed out in the Declaration, both the difficulty and cost of purification increases as the purity is increased beyond 99.5%. There is no reason to undertake the difficult and costly task of reducing the impurities beyond 0.5% in the absence of any advantage to be achieved as a result, and the art does not provide a reasonable expectation of any advantage. Applicants further agree with the Examiner that the person skilled in the art would seek to obtain a balance between purification cost and shelf stability of the metal hydrate, but for the reasons just stated, the skilled person would expect that optimization would have been realized at an impurity level of 0.5%. Nothing suggests that any advantage could be realized by reducing their impurity level to 0.2 % or less.

The Office Action comments that without a showing of unexpected results, the claimed amount of alkali metal based substance contained in the metal hydrate cannot be considered critical. Although the statutory requirement is unobviousness and not criticality, it is respectfully submitted that the requested showing is already present. Tables 1 and 3 - 10 and Figure 1 show that when the impurity level was 0.2% or less, the UL94 classification was either V1 or V0 but when the impurity level was greater than 0.2%, the rating was V2. The data shows that this dramatic change in flammability changed over a difference of only 0.04% alkali metal content (0.18% to 0.22%), and this is reflected in the drastic change in slope between these data points in Figure 1. As pointed out in the Declaration, these results are unpredictable and are surprising and unexpected.

In the Response to Arguments, it is asserted that it is known in the art that sodium oxide supports combustion of other materials and it would be expected that the total combustion time of a resin composition would increase within an increase in the amount of sodium oxide. No factual basis for this assertion has been cited, as is required for reliance, and it is noted that Wikipedia lists sodium oxide as non-flammable. In any event, there is no reason to believe that a difference of only 0.04% would, as discussed above, dramatically reduce the flammability from UL94 V2 to UL94 V1 or better. That is surprising, unexpected and unpredictable.

In light of the foregoing considerations, none of the other assertions made in the Office Action need be addressed. Nevertheless, it is necessary to specifically traverse the assertion that the reference to the plant derived resin is a product by process limitation since it is not and no process of making the resin is set forth in the claims. With respect to the other assertions, the comments made in the response filed 30 July 2008 are incorporated herein by reference to the extent necessary.

Claims 6 and 12-15 were rejected under 35 U.S.C. 103 over Yamada in view of Honda. This rejection is also respectfully traversed. Neither the current Office Action nor the previous Office Action identifies the reason that Honda was cited although it was apparently to meet the additional recitations of these dependent claims rather than to cure any of deficiencies in Yamada. A review of Honda shows that it does not, in fact, cure any of the deficiencies in Yamada and therefore these claims are also allowable.

Claims 7 and 16-19 were rejected under 35 U.S.C. 103 over Yamada in view of Fujihana. As in the prior rejection, the particular reason that Fujihana has been cited as not set forth but appears to be to meet the recitations of these claims rather than cure the

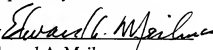
deficiencies of Yamada. Again, a review of the reference shows that the basic deficiencies in Yamada discussed above still exist and therefore these claims are patentable.

Claim 20 was rejected under 35 U.S.C. 103 over Yamada in view of Honda and Fujihana. For the reasons discussed above, this claim is also patentable. Neither of the secondary references cure any of the basic deficiencies in Yamada.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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